

MADHAV INSTITUTE OF TECHNOLOGY AND SCIENCE,
GWALIOR

Department of Architecture and Planning
One day Seminar on 2nd September 2021



Technology and Innovation

under PMAY, 'Awas Par Samvaad'

Role of indigenous housing technologies in transforming the Indian
construction sector using local material and practices.

(in collaboration with Egis India Consultancy)

Co-ordinators:-

Dr. S.S Jadon
Professor, Architecture and Planning

Ar. Richa Mishra
Assistant Professor, Architecture and
Planning

Ar. Harshita Mishra
Assistant Professor, Architecture and
Planning

Dr. Anjali S. Patil
Head, Architecture and Planning

Aim:

The aim of this workshop/seminar is to develop a collective understanding on the role of indigenous technology in the present context.

Objective:

- To develop understanding of indigenous technology.
- To implement them in present context to help meeting housing demands.
- To discuss ongoing plans and practices related to indigenous housing and use of local materials and practices.

Why this workshop/seminar is important:

Housing is one of the greatest challenges faced by the residents, policy implementers and policy makers. High impact communications about the value of indigenous housing in transforming Indian construction sector using local materials and practices will provide a ray in the direction of solutions. Discussion about the innovations and technologies requires engaging people with diverse and conflicting perspectives in dialogues about what is at stake, who benefits and who stands to lose. This workshop provides participants with practical and effective techniques applicable in a variety of contexts to improve context and communication strategies.

What participants will learn during the workshop/Seminar?

The panelists having a versatile and practical approach to the said topic have been shortlisted to enhance the learning process. A group of professionals including the academicians and practitioners have been chosen for this purpose.

- Participants will learn how to apply local materials and practices in today's on growing housing demands.
- Participants will learn how to conduct a process while undertaking construction dealing indigenous technology and people.

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- Participants will learn and practice the incorporation of social and cultural parameters apart from the construction processes.

Expected Outcome:

The faculty and students will be able to develop awareness related to the field innovations.

ABOUT THE PROGRAMME:

'Awas Par Samvaad' Overview

Pradhan Mantri Awas Yojana (Urban) [PMAY-U] Mission under Ministry of Housing and Urban Affairs (MoHUA) proposes to conduct workshops and seminars 'Awas Par Samvaad' for multiple stakeholders i.e. urban practitioners, engineering/planning/architecture/social sciences/finance students, faculties, academia, Civil Society Organisations, etc., from 1st July to 30th September 2021 through Educational Institutions and Primary Lending Institutions (PLIs)/Banks/ Housing Finance Companies (HFCs) in association with States/UTs.

Objective

Awas Par Samvaad aims to deliberate, discuss, disseminate share learnings and knowledge on 'Housing in Urban Spaces' amongst multiple stakeholders belonging to varied streams of learning and practices e.g. engineering, urban community development, planning, finance, etc.

Target Audience:

Multiple stakeholders: urban practitioners, students of engineering, urban planning, town planning, architecture, social sciences, geography, other humanities subjects, nance, economics, Marketing, Micro Finance, faculties, academia, Civil Society Organisations, Real Estate Sector, Bankers, public representatives, community leaders, Government ocials of other urban missions like Smart Cities, AMRUT etc and other stakeholders.

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Topics discussed includes:

- New emerging construction technologies and opportunities for Technograhis to learn and adopt from Light House Projects (LHPs) with real time demonstration
- Changing faces of construction practices in India
- Role of indigenous housing technologies in transforming Indian construction sector using local material and practices
- Transformational role of innovative construction technologies in mass housing and large- scale adoption
- Methods to make housing climate resilient adopting environment friendly practices and meeting SDG goals
- Measures of Quality Control & Assurance in housing projects

S.No.	State	Institute/University/PLI Name	Theme	Mode	Workshop/Seminar Date	Online Link
11	Telangana	IIFL Home Finance Limited	Technology and Innovation	Online	14-09-2021 to 14-09-2021	N/A
12	Tamil Nadu	Hindustan Institute of Technology & Science	Technology and Innovation	Online	15-09-2021 to 15-09-2021	Click Here
13	Gujarat	Parul University	Social Mobilisation	Online	26-08-2021 to 26-08-2021	Click Here
14	Punjab	IIFL Home Finance Ltd	Technology and Innovation	Online	10-09-2021 to 10-09-2021	N/A
15	Tamil Nadu	MAHINDRA RURAL HOUSING FINANCE LTD	Financial Inclusion	Online	25-08-2021 to 25-08-2021	Click Here
16	Assam	National Institute of Technology Silchar	Technology and Innovation	Online	21-08-2021 to 22-08-2021	Click Here
17	Madhya Pradesh	School of Planning and Architecture	Inclusive Housing	Online	20-08-2021 to 21-08-2021	Click Here
18	Madhya Pradesh	Punjab national bank	Financial Inclusion	Online	16-08-2021 to 17-08-2021	Click Here
19	Madhya Pradesh	Madhav Institute of Technology and Science	Technology and Innovation	Offline and Online	02-09-2021 to 02-09-2021	Click Here
20	Madhya Pradesh	Shri G.S. Institute of Technology & Science, Indore	Technology and Innovation	Offline and Online	07-09-2021 to 14-09-2021	Click Here

Agenda

To put forward the latest technology and advancements related to technology and innovation related to PMAY amongst the students, academicians, practitioners, members of urban local bodies.

The major focus of the workshop relies on the theme technology and innovation under PMAY. The transformation of on-site construction systems

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to the off-site construction systems was discussed. There is a need to focus on alternative, innovative as well as indigenous practices if the need of the hour for fulfilling the supply-demand needs. Panel discussions on Role of indigenous housing in transforming Indian construction sector using local materials and practices through various case studies of India and Abroad by the discussions on indigenous and sustainable solutions. The Incorporation of local material and practices would enhance the community-led and focused on ensuring the right to adequate, affordable, environmentally sustainable housing for low-income indigenous families in rural areas and semi-urban areas, while preserving traditional culture and building practices. It may also help with minimizing the ecological footprint, making use of environmentally sustainable building materials and preserving traditional indigenous building practices is a key focus of the project. The Locally-sourced materials with low embodied energy, including earth/adobe, water, stone, timber, sand and gravel, have been used in housing construction. Discussions were made on challenges for Architects and Practitioners related to the PMAY and also the effectiveness of thermal comfort on mass housing. Discussions were made on the disaster resilient technology for Mass Housing followed by discussions on various case studies and examples followed by questions and answers by participants.

Details of Sessions:

Session	MODE OF CONDUCTION	Theme
SESSION: 1/Panel1	OFFLINE	Opening Remarks by Workshop Coordinator Ar. Richa Mishra, Assistant Professor Architecture and Planning.
	OFFLINE	Lecture1: Introduction to PMAY by Ar. Richa Mishra in

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		collaboration with Egis.
	ONLINE	Lecture2: Emerging construction system for mass housing by Dr. Shailesh K Agarwal Ji, Ex. Director BMTPC.
	ONLINE	Lecture3: PMAY: Challenges and opportunity for Architects by Dr. Vasudha Gokhale of B.N.C.A.Pune.
	ONLINE	Lecture4: Role of Indigenous technology and materials from case studies of India and Nepal by Aagaur studio Ar. Tapas Upadhyay and Nikhil Paliwal.
SESSION: 2/Panel2	OFFLINE	Lecture1: Improving the thermal comfort in mass housing by Dr.Anjali Patil, Head Architecture and Planning MITS.
	OFFLINE	Lecture2: Role of Indigenous technology and materials from case studies in Gwalior by Chaukhat studio Ar. Kripal Singh Bhadoriya and Ar. Ram Rasayan.
	OFFLINE	Lecture3: "Earthquake Resistant Design by Base Isolation: Concept and Applications" by Dr.S.K Jain, Prof. Civil Department MITS.
	OFFLINE	Concluding Note by Workshop Coordinator Dr. S.S.Jadon, Professor Architecture and Planning

Speakers Details:

Dr. Shailesh Agrawal Ji

Executive Director, Building Materials & Technology Promotion Council (BMTPC), MoHUA.

Bio- He works towards the mandate of Affordable Housing for All by promoting & transferring emerging housing technologies for faster & sustainable development at the grass root level for the common people of India.

Presentation Topic - Emerging construction system and new technology for mass housing



Abstract- Speaker introduced the emerging construction systems and technologies which are required in case of mass housing at a faster rate. He also discussed the ongoing projects using innovative technologies like 3D printing technology in Indian construction systems etc under the Pradhan Mantri Awas Yojana scheme through varied examples.

Dr. Vasudha Gokhale, Professor, BNCA-Pune

Bio- Her academic qualifications include B.Arch from MANIT,

Bhopal, M.Arch and PhD from IIT Roorkee. Her areas of expertise are Disaster management, Architectural research and Sustainable architecture. She was a visiting scholar at University of Melbourne, Australia and Victoria University of Wellington, New Zealand. She has more than 115 publications in international, national journals and conference proceedings on her account.

Presentation Topic - PMAY: Challenges and opportunity for Architects



Abstract- Pradhan Mantri Awas Yojana issues various opportunities along with challenges for Architecture practitioners. Speaker highlighted the use of Data collection techniques like GIS and also discussed technologies like Building Information Modelling and its implications suggesting a way forward.

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Dr. Anjali S Patil, Associate Professor and Head of Architecture & Planning Department, MITS Gwalior.
Presentation Topic - Improving thermal comfort in mass housing.



Abstract- The speaker highlighted the key issues of thermal comfort which can be incorporated with cost efficiency and green solutions in mass housing projects like Pradhan Mantri Awas yojana. The speaker also highlighted various tools and techniques for the incorporation of the same.

Dr. S.K.Jain, Professor, MITS

Bio- He has a number of research papers published in reputable journals. Received a number of research awards by premier bodies viz University of Roorkee, Institution of Engineers (India), Indian Society for Technical Education, IIT Roorkee, All India Council for Technical Education, MHRD (Govt of India).



Presentation Topic - Earthquake Resistant Design by Base Isolation: Concept and Applications

Abstract- The speaker discussed the seismic profile and need for its incorporation in mass housing. The techniques of Base Isolations especially in case of vertical housing was briefly discussed with its theories as well as application with various international examples.

Ar. Richa Mishra

Assistant Professor, Architecture & Planning Department, MITS Gwalior

Bio- She is a conservation architect, working in the areas of research through her writings on cultural landscapes,



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sacred landscapes, historic cities, etc. She is a member of INTACH and ICOMOS EPWG Member.

Presentation Topic - Introduction to PMAY

Abstract- The speakers introduced the housing shortage scenario in India. Later. Salient features of the Pradhan Mantri Awas yojana were introduced and its innovative technologies

were discussed. Projects like the Light House Projects (LHP) for Mass housing upto 1000 houses were discussed for cities like Indore, Chennai etc

Ar. Kripal S. Bhadoriya & Ar. Ram Rasayan

Co-Founder of Chaukhat Studio, Gwalior

Bio- Being a young professional both are involved in

exploring sustainable approaches and experimenting with

local materials and technologies to develop a resilient society.

Presentation Topic - Role of Indigenous technology and materials from case studies in Gwalior

Abstract- The speakers from Chaukhat studio discussed the role of indigeneous technology and constructions practices in transforming the Indian construction sector by sharing their experiences of working with the local materials like mud and locally available stones and technologies like Adobe construction which in turn offer sustainable as well as cost effective solutions in case of various mass housing projects.

Ar. Tapas Upadhyay & Mr. Nikhil Paliwal

Aagaur Studio, Bhopal

Bio- For the past two years he has been working on community- oriented design in Madhya Pradesh. He has an

experience of working with Hunnarshala Foundation in Kutch,



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Gujarat and had also worked on various projects in India and Nepal

Presentation Topic - Role of Indigenous technology and materials from case studies of India and Nepal

Abstract- The speakers from Aagaur studio discussed the role of indigeneous technology and construction practices in transforming the Indian construction sector by sharing the case studies of work done by them using indigeneous technologies in Nepal and India. The speaker also discussed his experience from working with Hunarshala, Bhuj with the students and practitioners to introduce the alternative technology of indigeneous construction systems in mass housing projects.

PARTICIPANTS

154 participants were present in both online and offline mode. They included: Students, Faculty members, members from ULBs GMC,GDA. Members from Egis and PMAY officials.

MEDIA PROMOTIONS



एमआईटीएस में वास्तुकला पर आधारित संगोष्ठी में उपस्थित प्रतिभागी।

नगर संवाददाता

रवालियर। वास्तुकला और योजना विभाग, एमआईटीएस ने प्रधानमंत्री आवास योजना के तहत आवास पर संवाद के विषय नवाचार और प्रौद्योगिकी पर एक दिवसीय संगोष्ठी का आयोजन शुक्रवार सुबह किया। इस अवसर पर विशेषज्ञों ने छात्रों और उपस्थित लोगों को बताया कि हम कम खर्च में किस तरह लेटेस्ट टेक्नोलॉजी अपनाकर सर्वसुविधायुक्त घर बना सकते हैं। विशेषज्ञों ने बताया कि घर बनाने के लिए इन दिनों कई आधुनिक टेक्नीक आई हैं जिनसे कम खर्च में सर्वसुविधायुक्त घर बनाया जा सकता है। कम खर्च में ही हम घर में सभी सुविधाओं को ला सकते हैं।

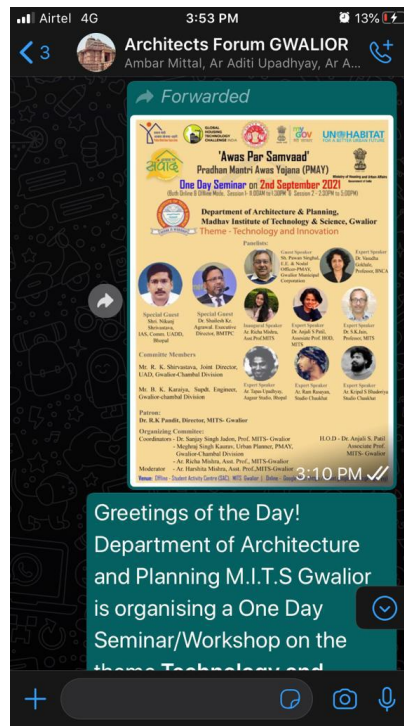
संगोष्ठी का उद्देश्य विविध हितधारकों के बीच शहरी स्थानों में आवास पर विचार-विमर्श, चर्चा, साझा शिक्षा और ज्ञान का प्रसार करना था। यह कार्यक्रम कोविड सुरक्षा प्रोटोकॉल को ध्यान में रखते हुए वर्चुअल और इन-पर्सन मोड दोनों में आयोजित किया गया। कार्यक्रम का आयोजन



संगोष्ठी में जानकारी देती सहायक प्रो. रूचा मिश्रा।

एमआईटीएस के प्रोफेसर डॉ. एसएस जादौन, सहायक प्रोफेसर रूचा मिश्रा के साथ ईजीआईएस इंडिया कंसल्टेंसी के मेहराज कौशल और विभागाध्यक्ष डॉ. अंजलि एस पाटिल के सहयोग से किया गया। कार्यक्रम का संचालन सहायक प्रोफेसर हर्षिता और अनमोल द्वारा किया गया। कार्यक्रम दो सत्रों में आयोजित किया गया। पहले सत्र के वक्ताओं में वीएफटीपीसी के कार्यकारी निदेशक डॉ. शैलेष के अग्रवाल, पुणे के बीएनसीए की प्रोफेसर वसुधा गोखला, आर्किटेक्ट तपस उपाध्याय और अगौर स्टूडियो के निखिल शामिल थे। उद्घाटन व्याख्यान सहायक प्रोफेसर रूचा मिश्रा ने दिया। दूसरे सत्र के वक्ताओं में वास्तुकला और योजना की विभागाध्यक्ष डॉ. अंजलि एस पाटिल, सिविल विभाग के प्रोफेसर एसके जैन, चौखट स्टूडियो के वास्तुकार कृपाल सिंह भदौरिया और राम रसायन ने टेक्नॉलजी और आवास पर अपने विचार व्यक्त किए। कार्यक्रम में 25 प्रतिभागी ऑनलाइन और 125 से अधिक प्रतिभागी ऑनलाइन उपस्थित थे, जिनमें शहरी स्थानीय निकायों जीएमसी और जीडीए के अधिकारी, पीएमएवाय योजना के अधिकारी, छात्र और व्यवसायी शामिल थे।

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Photographs



LEFT: PANELISTS FOR THE SESSION RIGHT: Ar. RICHA MISHRA INTRODUCING PMAY



LEFT: PARTICIPANTS ATTENDING THE CONFERENCE OFFLINE RIGHT: Dr. PATIL PRESENTING IN THE SESSION:2

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ANNEXURES:



'Awas Par Samvaad'
Pradhan Mantri Awas Yojana (PMAY)
One Day Seminar on 2nd September 2021
(Both Online & Offline Mode, Session 1- 11:00AM to 1:30PM & Session 2 - 2:30PM to 5:00PM)

Department of Architecture & Planning,
Madhav Institute of Technology & Science, Gwalior
Theme - Technology and Innovation

Panelists:

			
Special Guest Shri. Nikunj Shrivastava, IAS, Comm. UADD, Bhopal	Special Guest Dr. Shailesh Kr. Agrawal, Executive Director, BMTPC	Guest Speaker Sh. Pawan Singhal, E.E. & Nodal Officer-PMAY, Gwalior Municipal Corporation	Expert Speaker Dr. Vasudha Gokhale, Professor, BNCA
			
	Inaugural Speaker Ar. Richa Mishra, Asst.Prof.MITS	Expert Speaker Dr. Anjali S Patil, Associate Prof. HOD, MITS	Expert Speaker Dr. S.K.Jain, Professor, MITS
Committee Members			
Mr. R. K. Shrivastava, Joint Director, UAD, Gwalior-Chambal Division	Expert Speaker Ar. Tapas Upadhyay, Aagaur Studio, Bhopal	Expert Speaker Ar. Ram Rasayan, Studio Chaukhat	Expert Speaker Ar. Kripal S Bhadoriya Studio Chaukhat
Mr. B. K. Karaiya, Supdt. Engineer, Gwalior-chambal Division			
Patron: Dr. R.K Pandit, Director, MITS- Gwalior			
Organizing Committee:			
Coordinators - Dr. Sanjay Singh Jadon, Prof. MITS- Gwalior - Meghraj Singh Kaurav, Urban Planner, PMAY, Gwalior-Chambal Division			H.O.D - Dr. Anjali S. Patil Associate Prof. MITS- Gwalior
Moderator - Ar. Harshita Mishra, Asst. Prof.,MITS-Gwalior			

Venue: Offline - Student Activity Centre (SAC), MITS Gwalior | Online - Google Meet (<https://meet.google.com/cgk-hgfe-yjj>)

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